



AMENDMENT UNDER 37 C.F.R. § 1.116
EXPEDITED PROCEDURE
EXAMINING GROUP 1714

#10
08/06/02
AS

03500.014833

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:)
Katsuhiko TAKAHASHI, et al.) : Examiner: C. Shosho
Application No.: 09/672,769) : Group Art Unit: 1714
Filed: September 29, 2000) :
For: AQUEOUS INK COMPOSITION FOR) :
INK JET, INK CARTRIDGE,) :
RECORDING UNIT, INK JET) :
RECORDING APPARATUS, AND INK : July 31, 2002
JET RECORDING METHOD)

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8/12/02

Director, the Commissioner for Patents
BOX AF
Washington, D.C. 20231

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AUG 05 2002
TC 1700

REQUEST FOR RECONSIDERATION
AFTER FINAL REJECTION

Sir:

In response to the final Office Action dated May 1,
2002, Applicants respectfully submit the following remarks.

REMARKS

Favorable reconsideration and allowance of the
subject application are respectfully solicited.

Claims 1-11 are pending in the application, with Claims 1 and 8-11 being independent. Claims 1-11 were rejected under 35 U.S.C. § 103(a) as allegedly obvious over Tsutsumi et al. (U.S. Patent No. 6,031,019) in view of Suzuki et al. (U.S. Patent No. 6,153,001). Claims 1-11 also were rejected under 35 U.S.C. § 103(a) as allegedly obvious over Suzuki et al. in view of Tsutsumi et al. Applicants respectfully disagree with these rejections.

Before addressing the merits of the rejections, Applicants believe it will be helpful to review some features and advantages of the claimed invention. The present invention, as recited in Claim 1, relates to an aqueous ink composition for ink jet comprising:

- (i) a resin encapsulating a colorant and having a cationic hydrophilic group,

- (ii) a self-dispersing pigment having a cationic hydrophilic group bonded to the surface directly or via another atomic group, or a pigment fine particle dispersed with a dispersant having a cationic hydrophilic group;

- (iii) a polyhydric alcohol; and

- (iv) a compound selected from the group consisting of a compound represented by general formula (I), a compound represented by general formula (II), and mixtures thereof.

Independent Claims 8-11 recite an ink cartridge, a recording

unit, an ink-jet recording apparatus and an ink-jet recording method using such an ink. In Applicants' view, the cited references do not teach or suggest the claimed invention.

The Examiner acknowledges that Tsutsumi et al. does not disclose the use of the specific urea derivatives or the specific pigment of the present invention, but nevertheless takes the position that the broad disclosure by Tsutsumi et al. of urea encompasses the specific urea derivatives of the present invention, and that it would have been obvious for one of ordinary skill in the art to select the specific urea derivatives recited in Claims 1 and 8-11 of the present invention. The Examiner also asserts that Suzuki et al. discloses the use of ethylene urea to prevent clogging of nozzles, and that urea can be used in place of ethylene urea, and concludes that it would have been obvious for one of ordinary skill in the art to use ethylene urea instead of urea in the ink of Tsutsumi et al.

Applicants assert however, as clearly demonstrated by the results set forth in the Declaration submitted herewith, that ethylene urea and urea give significantly different performances with respect to ink storage stability when added to an aqueous ink-jet ink containing a resin encapsulating a colorant and having a cationic hydrophilic group, and a cationic self-dispersing pigment, both dispersed in an aqueous medium. This difference in performance is not disclosed or suggested by Tsutsumi et al. Moreover, Suzuki et al., treats urea and

ethylene urea as equivalents, and does not teach or suggest the superiority of ethylene urea over urea. Accordingly, the combination of Tsutsumi et al. and Suzuki et al. does not teach or suggest the advantageous effect of the present invention, and the present invention is not obvious over Tsutsumi et al. in view of Suzuki et al.

The Examiner also acknowledges that Suzuki et al. does not disclose the colorant-containing resin of the present invention, but relies on Tsutsumi et al. as disclosing pigment fine particles encapsulated into fine polymer particles wherein the polymer is obtained from cationic monomer, and concludes that it would have been obvious for one of ordinary skill in the art to use the color-containing resin in the ink of Suzuki et al. in order to obtain inks having improved water-fastness and anti-feathering properties. Applicants submit, however, that the improved water-fastness and anti-feathering effect should not be attributed only to the polymer emulsion, but to the ink of Tsutsumi et al. as a whole. Applicants further submit that it would not have been obvious for one of ordinary skill in the art to selectively extract the polymer particles — which are only one component of the ink — for use in the ink of Suzuki et al. Even if one of ordinary skill in the art did conceive the idea to use the polymer particles of Tsutsumi et al. in the ink of Suzuki et al., whether or not such an ink could be used as an ink-jet ink is not at all predictable, since the ink-jet properties of an

ink vary greatly according to what its components are. Thus, the present invention is not obvious over Suzuki et al. in view of Tsutsumi et al.

The Examiner has indicated that data and arguments regarding the criticality of ethylene urea versus urea should be presented in Declaration form. Enclosed herewith is a Declaration under 37 C.F.R. § 1.132 of co-inventor Yutaka Kurabayashi providing experimental results that show that ethylene urea is superior to urea with respect to providing stability of an ink in long-term storage. Instead of the "A" and "B" designations used as evaluation standards in the experimental results provided in the February 13, 2002 Amendment, the Declaration explains the results verbally.

Applicants conclude that the cited references do not teach or suggest the invention as presently claimed, either singly or in the combinations proposed by the Examiner. In particular, neither of the references teaches or suggests the superior effect of ethylene urea over urea in the ink of the present invention. Reconsideration and withdrawal of the Section 103 rejections are respectfully requested.

Applicants submit that the present invention is patentably defined by independent Claims 1 and 8-11. The dependent claims are allowable for the reasons given with respect to Claim 1 and because they recite features that are patentable

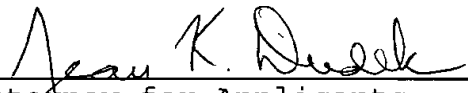
in their own right. Individual consideration of the dependent claims is respectfully solicited.

Applicants submit that this application is in condition for allowance, and a Notice of Allowance is respectfully requested.

This Request for Reconsideration After Final Rejection is an earnest attempt to advance prosecution and reduce the number of issues, and is believed to place this application in condition for allowance. Furthermore, Applicants respectfully submit that a full appreciation of these remarks and the Declaration will not require undue time or effort given the Examiner's familiarity with this application. No new claims have been added. Accordingly, entry of this Amendment Under 37 C.F.R. § 1.116 is respectfully requested.

Applicants' undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,



Attorney for Applicants
Jean K. Dudek
Registration No. 30,938

Enclosure: Declaration Under 37 C.F.R. § 1.132
of Yutaka Kurabayashi

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103834 v 1

In re Application of:

Docket No. 03500.014833

Katsuhiko TAKAHASHI, et al.

Application No.: 09/672,769

Examiner: C. Shosho

Filed: September 29, 2000

Group Art Unit: 1714

For: AQUEOUS INK COMPOSITION FOR
INK JET, INK CARTRIDGE,
RECORDING UNIT, INK JET
RECORDING APPARATUS, AND
INK JET RECORDING METHOD

Date: July 31, 2002



Director, the Commissioner for Patents

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Washington, D.C. 20231

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Sir:

Transmitted herewith is a Request for Reconsideration After Final Rejection in the above-identified application.

☒ No additional fee is required.

The fee has been calculated as shown below

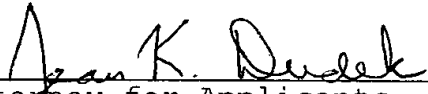
CLAIMS AS AMENDED						
	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NO. PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE	ADDITIONAL FEE
TOTAL CLAIMS	11	MINUS	20	= 0	x \$9 \$18	\$ 0.00
INDEP. CLAIMS	5	MINUS	5	= 0	x \$42 \$84	\$ 0.00
Fee for Multiple Dependent claims \$140°/\$280						
TOTAL ADDITIONAL FEE FOR THIS AMENDMENT---						\$ 0.00

☐ °Verified Statement claiming small entity status is enclosed, if not filed previously.

☐ A check in the amount of \$_____ is enclosed.

- ☐ Charge \$_____ to Deposit Account No. 06-1205. A duplicate copy of this sheet is enclosed.
- ☒ Any prior general authorization to charge an issue fee under 37 C.F.R. 1.18 to Deposit Account No. 06-1205 is hereby revoked. The Commissioner is hereby authorized to charge any additional fees under 37 C.F.R. 1.16 and 1.17 which may be required during the entire pendency of this application, or to credit any overpayment, to Deposit Account No. 06-1205. A duplicate copy of this paper is enclosed.
- ☐ A check in the amount of \$_____ to cover the fee for a _____ month extension is enclosed.
- ☐ A check in the amount of \$_____ to cover the Information Disclosure Statement fee is enclosed.
- ☒ Applicants' undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our address given below.

Respectfully submitted,



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